## **Agenda Topics for 2018 Summer NM Workgroups**

- What you need to know (Agencies) Using the 2015-590 Standard and Checklist
- Features SnapPlus 18 Easy buttons; New Nutrient Application Planner screen with complete spreadable acres calculations; SnapMaps crop and other field map labels; merging polygons; merging and copying databases; daily log; Batch reports ... (UW)
- Helpful Hints handout (All)
- Additional discussion of nutrient management implementation issues Maximum Return to Nitrogen— Should we update the SnapPlus default? (All)

2019 **Farmer Training Binders** 



To request copies, email mbroeske@wisc.edu by **October 1, 2018** 

Binders will ship mid-December. If you need to have your binders earlier, please let us know; we will try to accommodate.

A PDF of the complete farmer training manual will also be available at:

https://snapplus.wisc.edu/news-help/ snapplus-training-manual/



# Producer-Led Projects

2016: \$242,550

2017: \$197,065

2018: \$558,246



## PRACTICES AND ACTIVITIES

Start-up costs

Outreach and education events

Incentive payments for practices or equipment rentals:

Cover crops, buffers, reduced tillage, low disturbance manure injection, nutrient management, soil testing, farm walkovers

Research

Cover crops, nitrogen use efficiency, inline water drainage system

Recruitment/branding

# Tracking progress examples

- Phosphorus reductions through Spreadsheet Tool for Estimating Pollutant Loads (STEPL) and SnapPlus
  - Example: Horse Creek tracking cover crop implementation
    - **2016:** 875 acres
      - Estimated P load reduction of 650lbs
    - **2017**: 687 acres
      - Estimated P load reduction of 506lbs
  - Example: Tracking acres of conservation through SnapPlus NM software
    - Yahara Pride Farms Certification Program
    - Combines fields into one database to track overall changes in PI, soil loss and soil test P
    - Over 30,000 acres covered on 37 farms
      - From 2016 report: over 11,000lbs of estimated P reduction from cover crops,
         LDMI, strip till and headland stacking manure

## Application materials

DATCP Home > Producer-Led Watershed Protection Grants

### Producer-Led Watershed Protection Grants

#### Read our latest newsletter



The May news update features a recap of the Annual Producer-Led Workshop, a summary of the Buffalo-Trempeleau Farmer Network winter event and the 2018 producer-led grant awardees with project decriptions.



Producer-Led Watershed Protection Grants are awarded by the Wisconsin Department of Agriculture, Trade and Consumer Protection. The grants will go to projects that focus on ways to prevent and reduce runoff from farm fields and that work to increase farm participation in these voluntary efforts. Each application must come from a group of at least 5 farmers in the same watershed, collaborating with conservation agencies, institutions or nonprofit organizations. The maximum grant award per group will be \$40,000.

Fourteen producer-led groups received funding in 2016 for a total of \$242,550, eleven producer-led groups were awarded \$197,065 for 2017 funding and nineteen groups were awarded 2018 funding for a total of \$558,246.

#### Read summaries for all the projects 🖹 here.

DATCP's Nutrient Management Farmer Education (NMFE) Grants can be used in combination with producer-led funds. For more information, visit the NMFE webpage.

Find Your Watershed Find A Collaborator Project Examples

Create a MOU DATCP Resources E-News Updates

**Upcoming 2018 Events** 

#### Additional Resources

#### **Application Materials**



#### Impact Reports

**2016-17** 

#### Grant awardees

M Annual Impact Report Form

Extension Request Instructions

Reimbursement Form

#### Factsheets

Program Basics

A Resources for Producer-Led Groups

Applications due Monday, September 17 to Rachel.Rushmann@wi.gov

# Nutrient Management Farmer Education Grants

## **Tier 1 grants:** up to \$20,000.

- Provides nutrient management and SnapPlus training to develop 590 compliant plans.
  - Training includes: workshops, farm mapping, soil testing and manure spreader calibration.
  - Can be used for:
    - Participant payments
    - Administrative, training and support costs

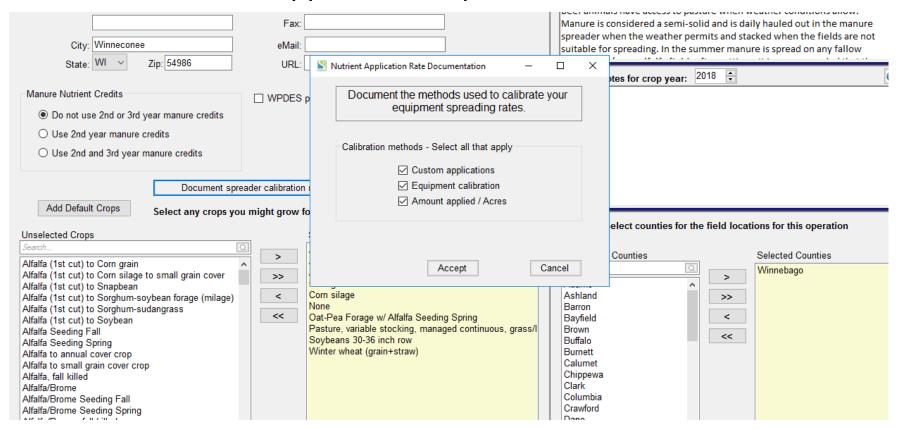
## **Tier 2 grants:** up to \$2,500

- Offer nutrient management training and education but developing a 590 compliant plan isn't required.
  - Can be used for administrative, training and support costs

Applications available by January 31st of every year, due on April 15th of that same year.

# SnapPlus2 ver.18

Follows USDA NRCS WI 2015-**590** Standard and UWEX Pub. **A2809** *Nutrient application guidelines for field, vegetable, and fruit crops in Wisconsin* **to protect farm profitability, water, and soil** with nutrient application requirements



# You might see higher soil loss with Ver. 17 on fields with small grains – Why?

Soil survey updates



 RUSLE2 soil loss calculations did not include straw removal for barley, oats, rye, triticale, wheat – (grain+straw). The consequence is that soil loss may be higher if grain and straw is harvested. If the field exceeds T, then change past crop to grain only. This will adjust the soil loss. In future years using the grain+straw will have the corrected erosion rates.





## Soil Tests and Field Names

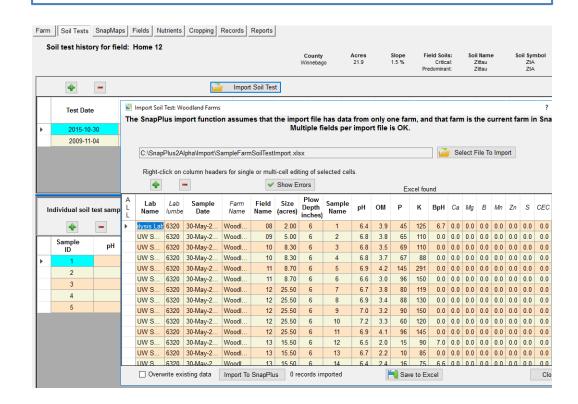
# Soil test – nutrient credits = fertilizer to apply

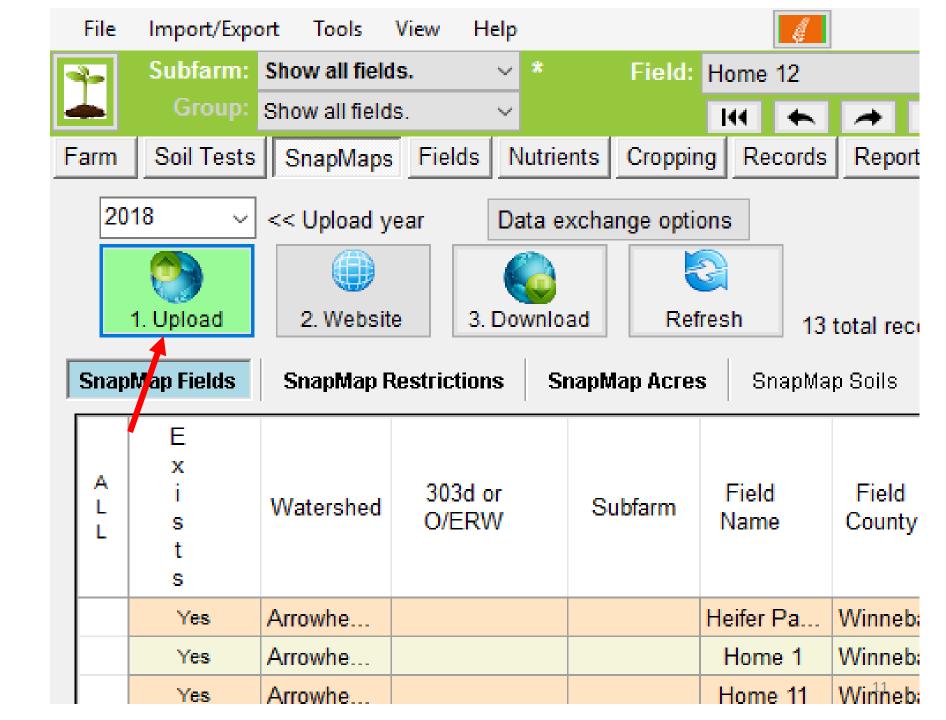
DATCP Certified Soil Testing Laboratories

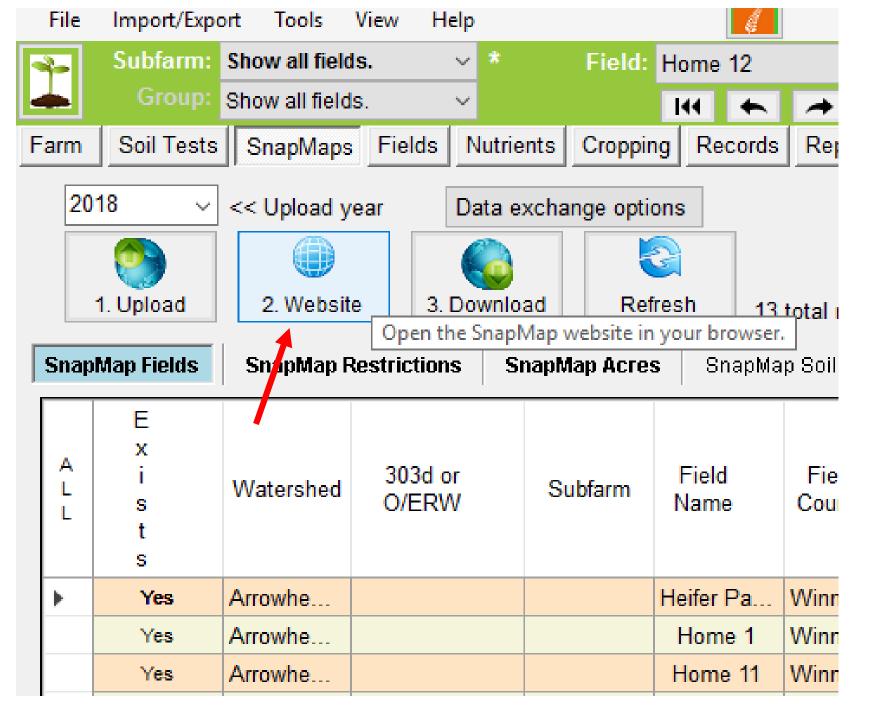
- A&L Great Lakes, Fort Wayne IN
- 2. AgSource, Bonduel WI
- 3. Dairyland, Arcadia WI
- 4. MVTL, New Ulm MN
- Midwest Laboratories, Omaha, NE
- 6. Rock River, Watertown WI
- 7. UW-Madison Soil & Forage Analysis, Marshfield WI

All these labs are Manure Analysis Proficiency program participates

- Naming Fields be sure to use letters, numbers, underscore, and spaces.
- Do Not Use special characters. This can causes the program to crash







### PDF Creation ▼

Draw a Feature \_

Edit features

Delete features

Field Snapping  $\square$ 

Import a shapefile

Export to shapefile >



Field with Common land unit

Exclusion area

Concentrated flow channel

Point

Tile line

Soil Sample

Headland stack

Manure prohibited area

Manure prohibited area by buffering field boundary

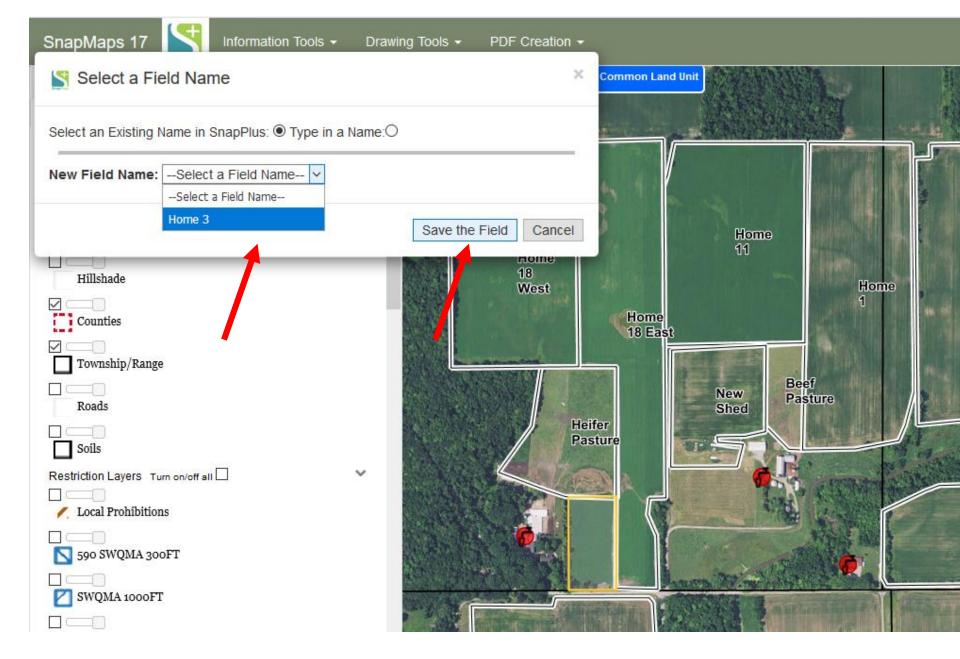
Manure prohibited area by buffering water features in a field

Manure prohibited area by buffering wetland features in a field

Manure prohibited area by buffering a custom features







## PDF Creation ▼

Draw a Feature -

Edit features

Delete features

Field Snapping  $\square$ 

Import a shapefile

Export to shapefile >



Field with Common land unit

Exclusion area

Concentrated flow channel

Point

Tile line

Soil Sample

Headland stack

Manure prohibited area

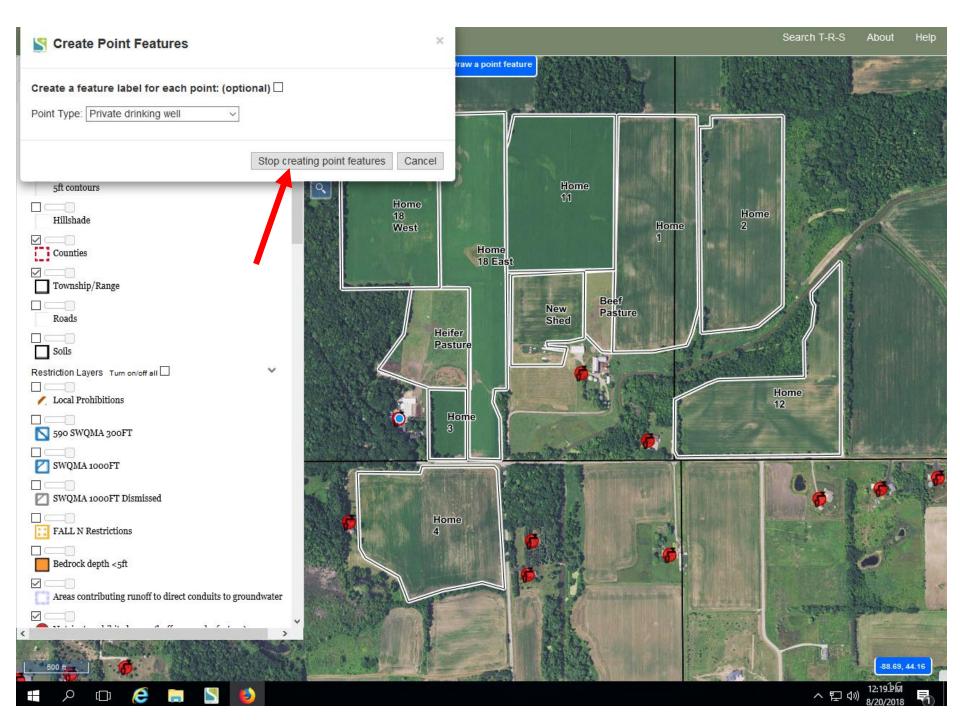
Manure prohibited area by buffering field boundary

Manure prohibited area by buffering water features in a field

Manure prohibited area by buffering wetland features in a field

Manure prohibited area by buffering a custom features





## Drawing Tools

## PDF Creation ▼

Draw a Feature

Edit features -

Delete features

Field Snapping

Import a shapefile

Export to shapefile >





**Active Tool: Navigation** 

Fields

Fields with common boundary

Points

Exclusion areas

Concentrated flow channels

Soil sample

Manure prohibited area

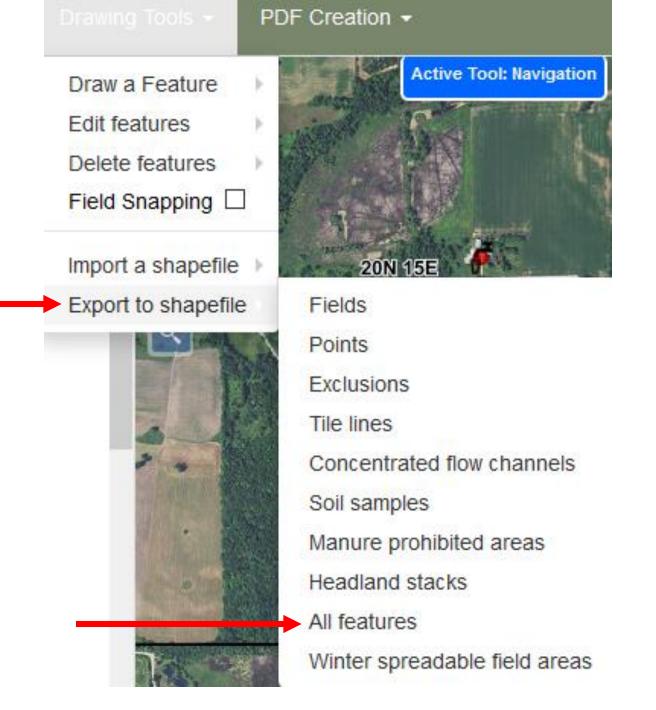
Split manure prohibited area

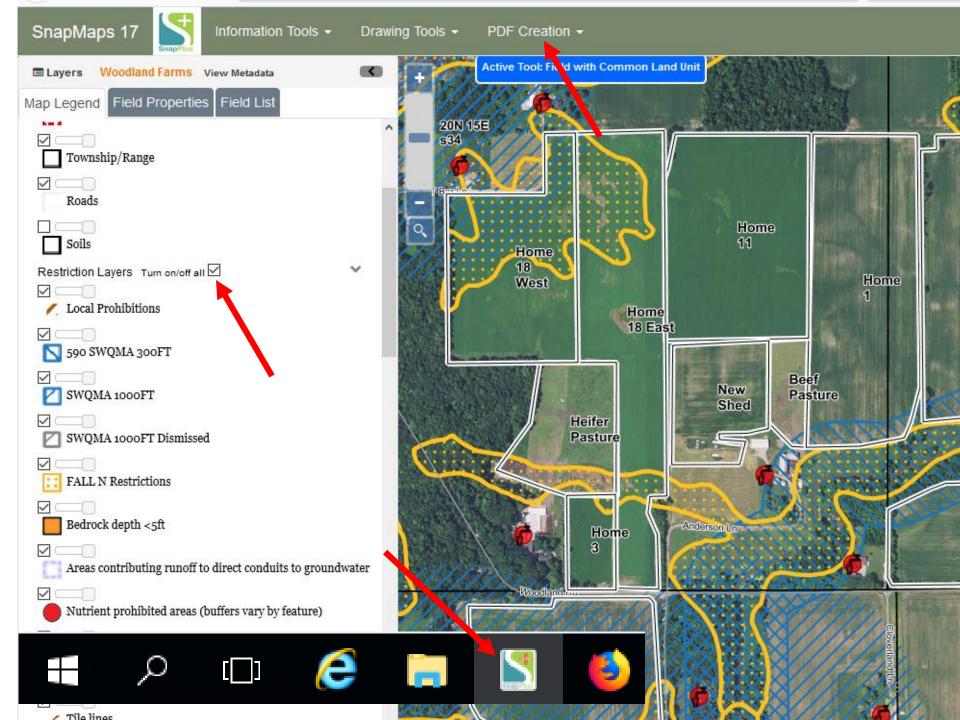
Split fields

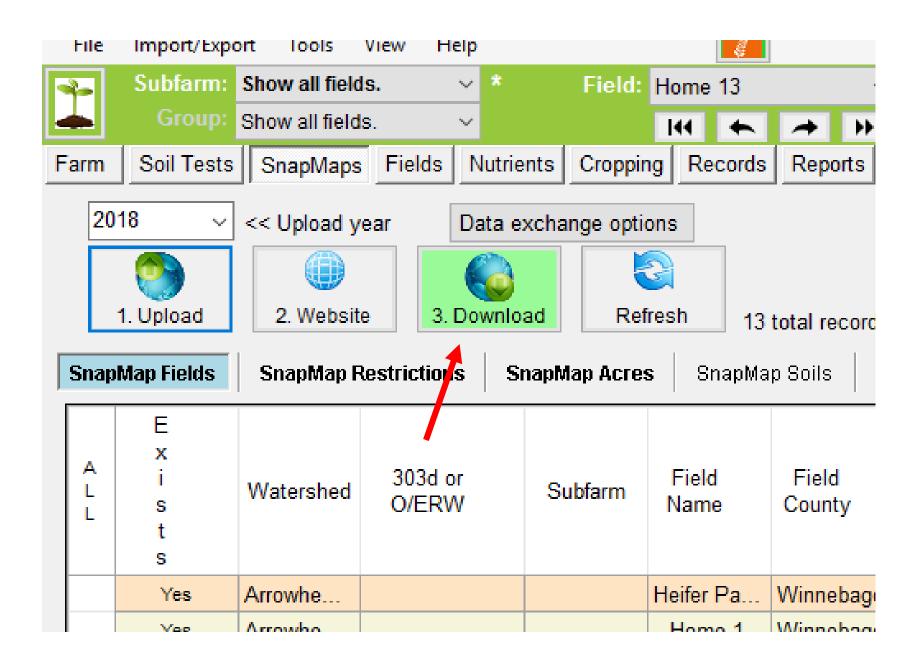
Dismiss a 1000ft SWQMA

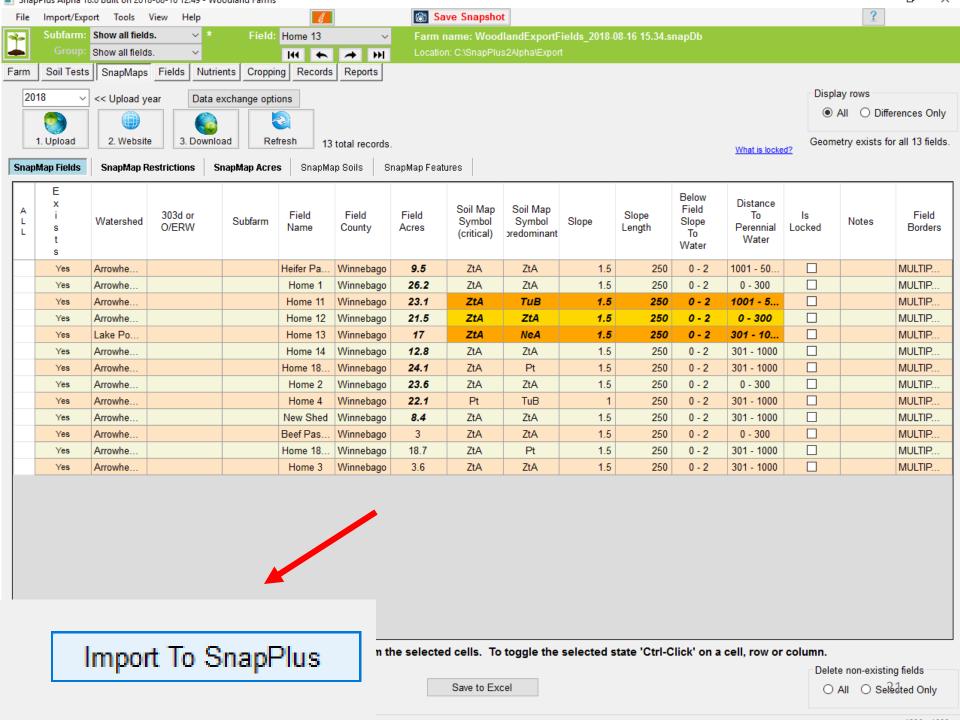
Restore dismissed 1000ft SWQMA

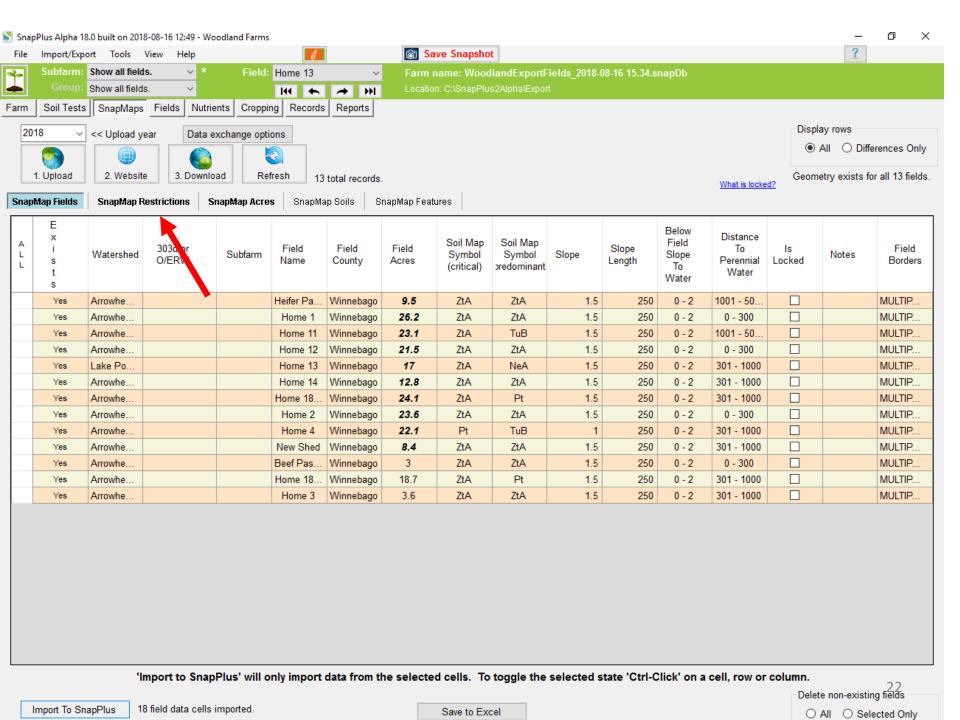
Headland stack













Snap	Map Fields SnapMap Restrictions S	SnapMap Acres   SnapMap Soils   Sna	pMap Features	
A L L	Subfarm Name	Field Name	Restriction	Distance to edge of field ft.
		Beef Pasture	Well 300 ft (Drinking Well 230 ft)	230
		Beef Pasture	SWQMA 300 ft	N/A
		Home 1	SWQMA 300 ft	N/A
		Home 1	Well 300 ft (Drinking Well 292 ft)	292
		Home 2	SWQMA 300 ft	N/A
		Home 3	Well 300 ft (Drinking Well 257 ft)	257
		Home 4	SWQMA 1000ft	N/A
		Home 4	Well 300 ft (Drinking Well 78 ft)	78
		Home 12	SWQMA 300 ft	N/A
		Home 12	Well 300 ft (Drinking Well 206 ft)	206
		Home 13	SWQMA 1000ft	N/A
		Home 13	Well 300 ft (Drinking Well 133 ft)	133
		Home 14	SWQMA 1000ft	N/A
		Home 14	Well 300 ft (Drinking Well 219 ft)	219
		Home 18 East	SWQMA 1000ft	N/A
		Home 18 East	Well 300 ft (Drinking Well 263 ft)	263
		Home 18 West	SWQMA 1000ft	N/A
		Home 18 West	Well 300 ft (Drinking Well 166 ft)	166
		New Shed	Well 300 ft (Drinking Well 157 ft)	157

Import To SnapPlus

ta from the selected cells. To toggle the selected state 'Ctrl-Click' on a cell, row  $\boldsymbol{\varepsilon}$ 

Save to Excel



2. Website





14 total records.

SnapMap Fields

1. Upload

SnapMap Restrictions

SnapMap Acres

SnapMap Soils

SnapMap Features

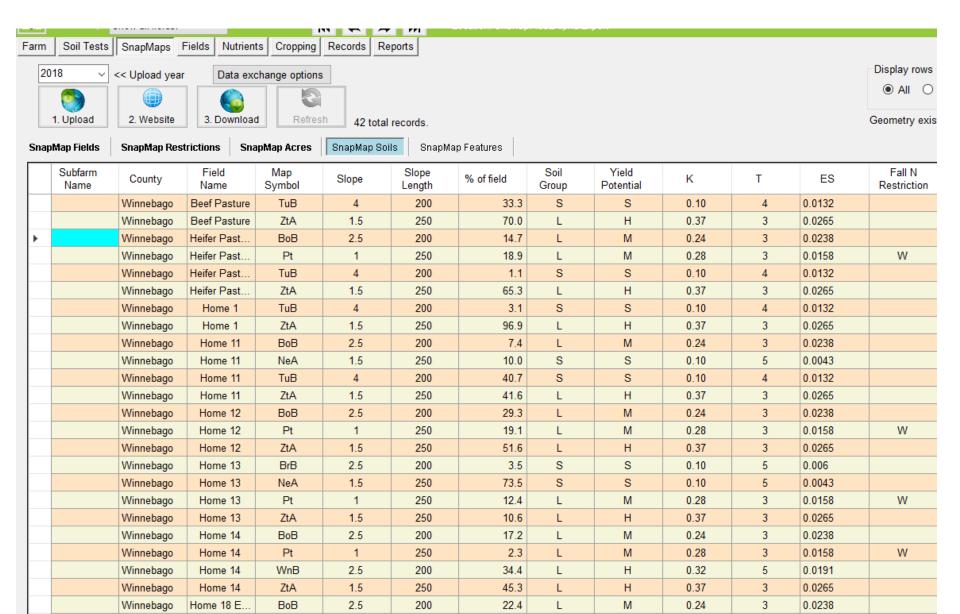
	Field Name	Actual Field Boundary Acres	Farmed/Cropping (map)	Winter spreadable acres
	Beef Pasture	3	3	2.7
	Home 3	3.6	3.6	3.4
	New Shed	8.4	8.4	7.8
<b> </b>	Heifer Pasture	9.5	9.5	9.5
	Home 14	12.8	12.8	10.5
	Home 13	17	17	6
	Home 18 West	18.7	18.7	12.5
	Home 12	21.5	21.5	17.2
	Home 4	22.1	22.1	0.3
	Home 11	23.1	23.1	23.1
	Home 2	23.6	23.6	20.4
	Home 18 East	24.1	24.1	23.7
	Home 1	26.2	26.2	24.4
	Σ Totals	213.6	213.6	161.5



Import To SnapPlus

from the selected cells. To toggle the selected state 'Ctrl-Click' on a cell, row or colu

Save to Excel 24



Pt

Winnebago

Home 18 E.

1

250

25.7

L

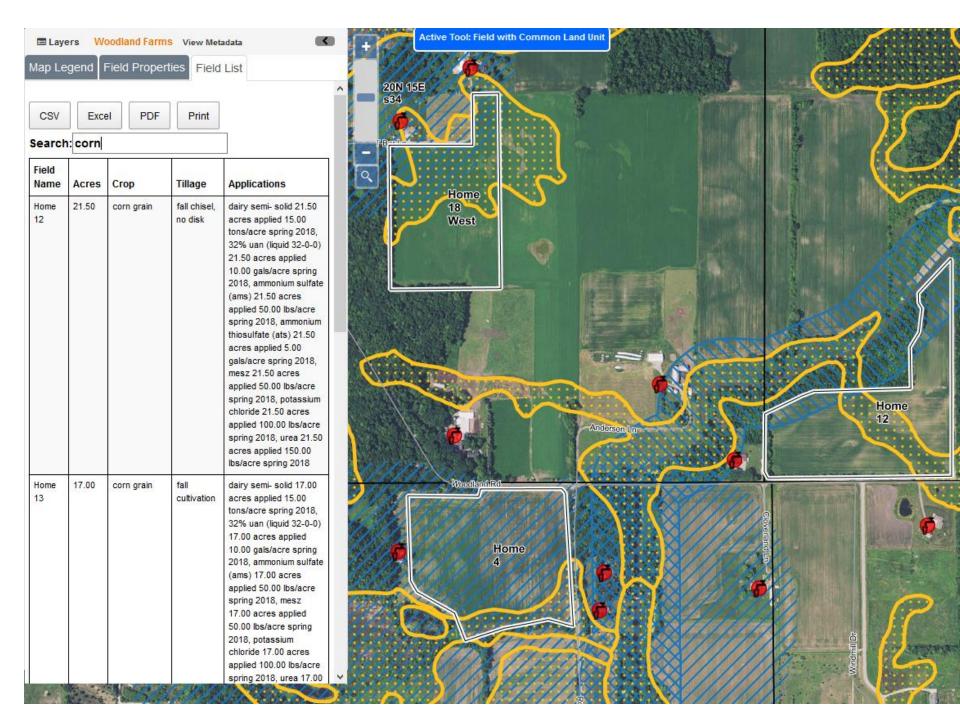
W

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0.0158

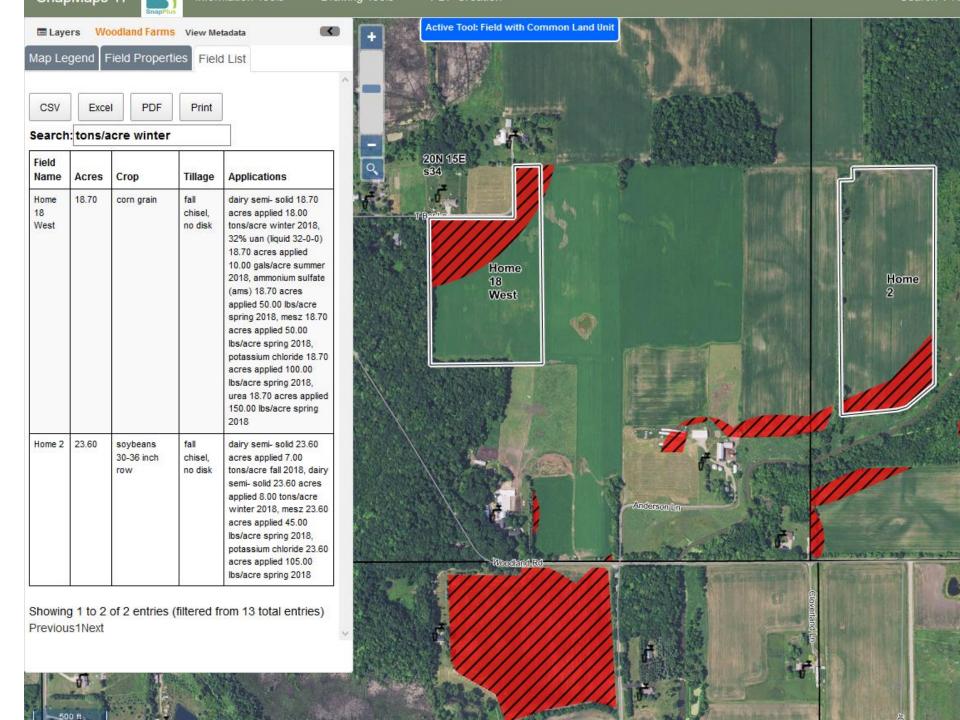
0.28

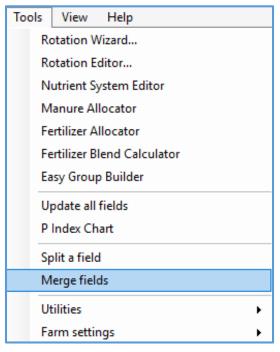
Μ

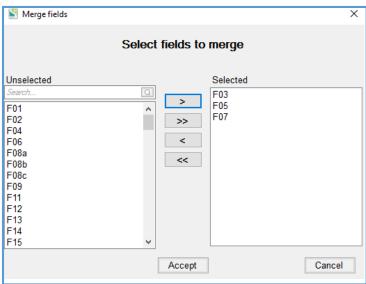


Field Name			Tillage	Applications					
Home 12	21.50	corn grain	fall chisel, no disk	dairy semi- solid 21.50 acres applied 15.00 tons/acre spring 2018, 32% uan (liquid 32-0-0) 21.50 acres applied 10.00 gals/acre spring 2018, ammonium sulfate (ams) 21.50 acres applied 50.00 lbs/acre spring 2018, ammonium thiosulfate (ats) 21.50 acres applied 5.00 gals/acre spring 2018, mesz 21.50 acres applied 50.00 lbs/acre spring 2018, potassium chloride 21.50 acres applied 100.00 lbs/acre spring 2018, urea 21.50 acres applied 150.00 lbs/acre spring 2018					
Home 13	17.00	corn grain	fall cultivation	dairy semi- solid 17.00 acres applied 15.00 tons/acre spring 2018, 32% uan (liquid 32-0-0) 17.00 acres applied 10.00 gals/acre spring 2018, ammonium sulfate (ams) 17.00 acres applied 50.00 lbs/acre spring 2018, mesz 17.00 acres applied 50.00 lbs/acre spring 2018, potassium chloride 17.00 acres applied 100.00 lbs/acre spring 2018, urea 17.00 acres applied 150.00 lbs/acre spring 2018					
Home 14	12.80	corn grain	fall chisel, no disk	32% uan (liquid 32-0-0) 12.80 acres applied 20.00 gals/acre spring 2018, ammonium sulfate (ams) 12.80 acres applied 50.00 lbs/acre spring 2018, ammonium thiosulfate (ats) 12.80 acres applied 5.00 gals/acre spring 2018, mesz 12.80 acres applied 50.00 lbs/acre spring 2018, potassium chloride 12.80 acres applied 100.00 lbs/acre spring 2018, urea 12.80 acres applied 150.00 lbs/acre spring 2018					
Home 18 West	18.70	corn grain	fall chisel, no disk	dairy semi- solid 18.70 acres applied 18.00 tons/acre winter 2018, 32% uan (liquid 32-0-0) 18.70 acres applied 10.00 gals/acre summer 2018, ammonium sulfate (ams) 18.70 acres applied 50.00 lbs/acre spring 2018, mesz 18.70 acres applied 50.00 lbs/acre spring 2018, potassium chloride 18.70 acres applied 100.00 lbs/acre spring 2018, urea 18.70 acres applied 150.00 lbs/acre spring 2018					

CSV	Exce	PDF	Print	-01
Search	: dairy			
Field Name	Acres	Сгор	Tillage	Applications
Home 11	23.10	soybeans 30-36 inch row	fall chisel, no disk	dairy semi- solid 23.10 acres applied 15.00 tons/acre fall 2018, mesz 23.10 acres applied 45.00 lbs/acre spring 2018, potassium chloride 23.10 acres applied 105.00 lbs/acre spring 2018
Home 12	21.50	corn grain	fall chisel, no disk	dairy semi- solid 21.50 acres applied 15.00 tons/acre spring 2018, 32% uan (liquid 32-0-0) 21.50 acres applied 10.00 gals/acre spring 2018, ammonium sulfate (ams) 21.50 acres applied 50.00 lbs/acre spring 2018, ammonium thiosulfate (ats) 21.50 acres applied 5.00 gals/acre spring 2018, mesz 21.50 acres applied 50.00 lbs/acre spring 2018, potassium chloride 21.50 acres applied 100.00 lbs/acre spring 2018, urea 21.50 acres applied 100.00 lbs/acre spring 2018, urea 21.50 acres applied 150.00 lbs/acre spring 2018 acres applied 150.00 lbs/acre spring 2018
Home 13	17.00	corn grain	fall cultivation	dairy semi- solid 17.00 acres applied 15.00 tons/acre spring 2018, 32% uan (liquid 32-0-0) 17.00 acres applied 10.00 gals/acre spring







To merge every other contour strip into a single field - Merge the fields in the database using **Tools** > **Merge fields** and select fields to merge. The merge will now merge the geometry too. Once you merge on the desktop, then upload the new field to the map, the fields will be merged.

To only export shape files for certain fields - Make a group of fields you want to export the shape files for, then upload those fields to the map and export the

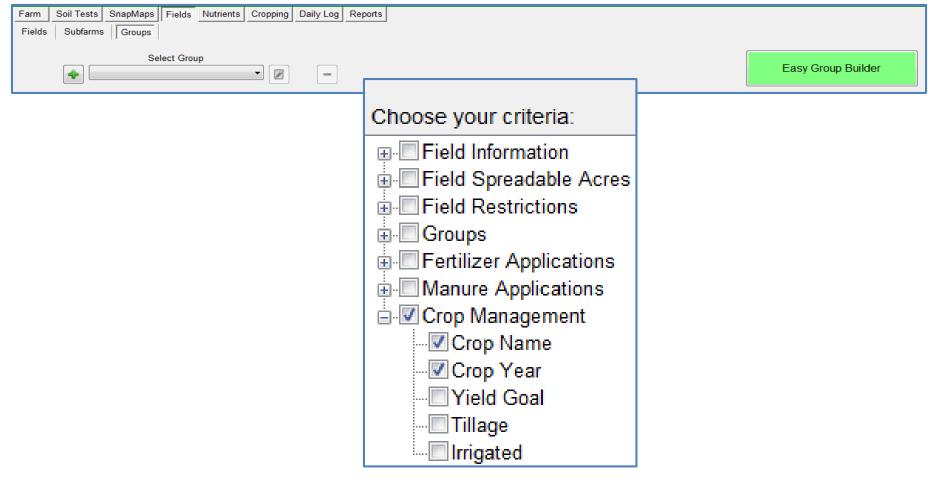
Upload

SnapMap Fields

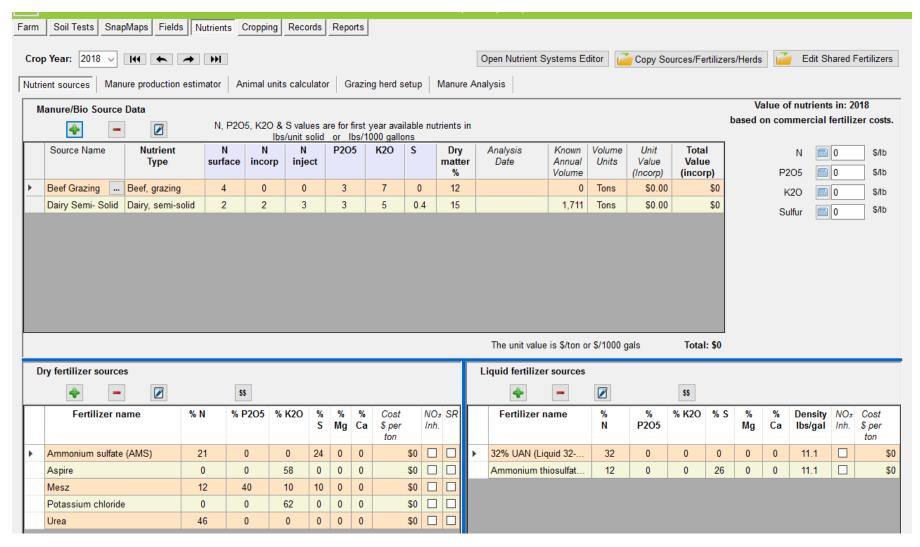
shape files.

												Total Acres: 213.6					d Cou	nt: 1	3	What is drained?				
Soil Map Symbol (critical)		S N	Soil Soil Map Series Symbol Name (pre- (critical) dominant)		S N	Soil Series Name (pre- dominant)			Field Slope (%)	Field Slope Length (ft)		Below Field Slope to Water (%)		Distance to Perennial Water (ft)		Re stricti Featu	on	D r a i n e d	V e r i f i e d					
Farm Soil Tests SnapMaps		s Fie	elds	Nutrier	Crop	ping Red	core	ls Report	ts															
,	elds Subfarn	l	roups	ı																				
<u>R</u>	ight-click on colum	n headers		Spread				<u>d cells.</u> d Problem:	s							Total Ac	res: 213.	6	Fiel	d Count: 13	W	hat is dra	ained?	
,	- Field Nam	ne	A c t i v	Sub Farm		Fsa Field #	Size (acres)	County	,	Soil Ma Symbo (critical)	i	Soil Series Name (critical)	Soil Map Symbol (pre- dominant)		Soil Series Name (pre- dominant)	Field Slope (%)	Field Slope Length (ft)	Below Field Slope to Water (%)	•	Distance to Perennial Water (ft)	Re striction Features		V e r i f i e	
	Beef Pastur	е		-			3.00	Winn	•	ZtA	•	ZITTAU	ZtA •		ZITTAU	1.5	250	0 - 2	-	0 - 300	yes			
	Heifer Pastu	ıre		+			8.00	Winn	-	ZtA	•	ZITTAU	ZtA •		ZITTAU	1.5	250	0 - 2	•	1001 🔻	yes			
	Home 1			7			26.50	Winn	-	ZtA	<b>-</b>	ZITTAU	ZtA •		ZITTAU	1.5	250	0 - 2		0 - 300	yes			
	Home 2			7			23.90	Winn		ZtA	_	ZITTAU		+	ZITTAU	1.5		0 - 2		0 - 300	yes			
	Home 3			7				Winn		ZtA	_	ZITTAU		+	ZITTAU	1.5		0 - 2		301 🔻	yes			
	Home 4 Home 11			7			22.70	Winn	• •	Pt ZtA	_	POY		+	TUSTIN TUSTIN	1.5		0 - 2	•	301 <b>*</b>	yes			
	Home 12			·				Winn	•	ZtA	_	ZITTAU		+	ZITTAU	1.5		0 - 2	-	0 - 300	yes			
				-				Winn		ZtA	_	ZITTAU		+	NEBAGO	1.5		0 - 2	-	301	yes			
	Home 14			-			13.10	Winn	Ŧ	ZtA	-	ZITTAU	ZtA -	- 1	ZITTAU	1.5	250	0 - 2	-	301 🔻	yes			
	Home 18 Ea	ast	$\square$	-			23.60	Winn	•	ZtA	Ŧ	ZITTAU	Pt •	-	POY	1.5	250	0 - 2	-	301 🔻	yes			
	Home 18 W	'est		-			18.70	Winn	-	ZtA	•	ZITTAU	Pt -	-	POY	1.5	250	0 - 2	-	301 🔻	yes			

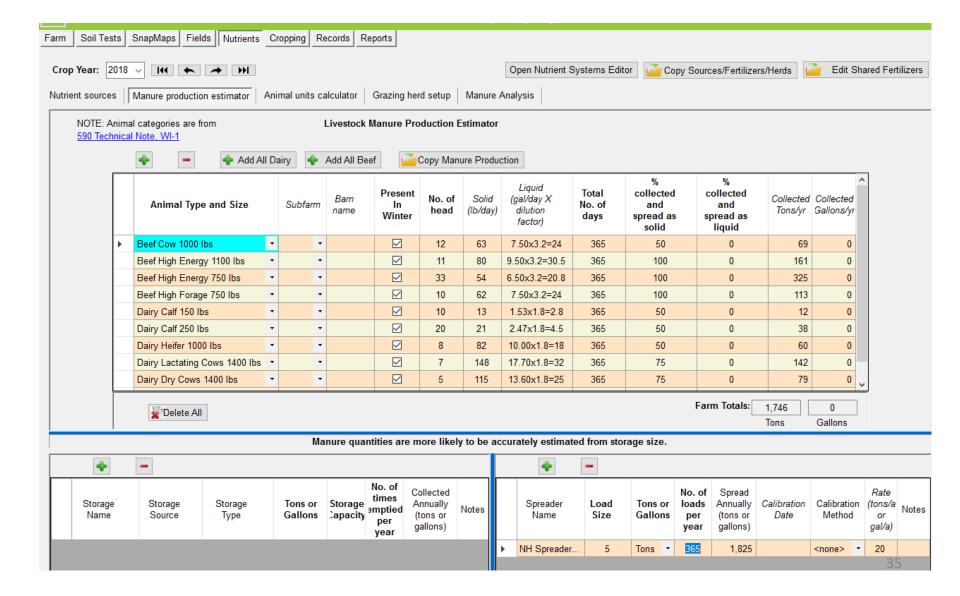
# Easy Group Builder



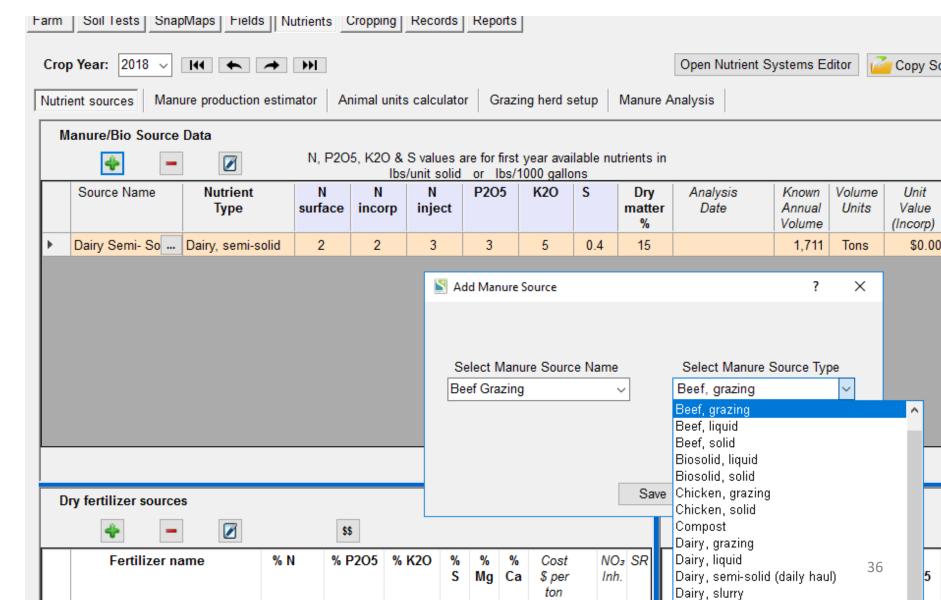
## **Nutrients Tab**

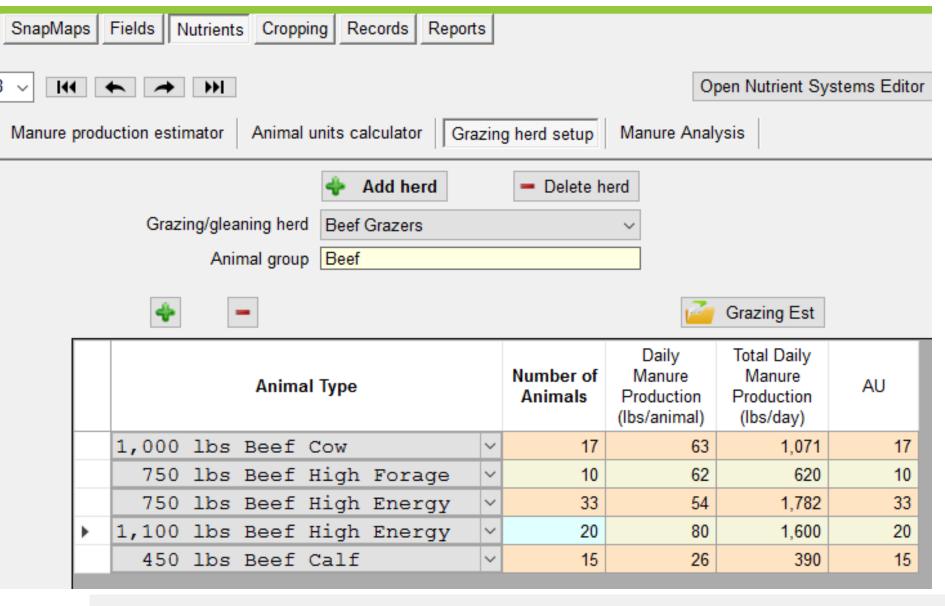


## Manure Production



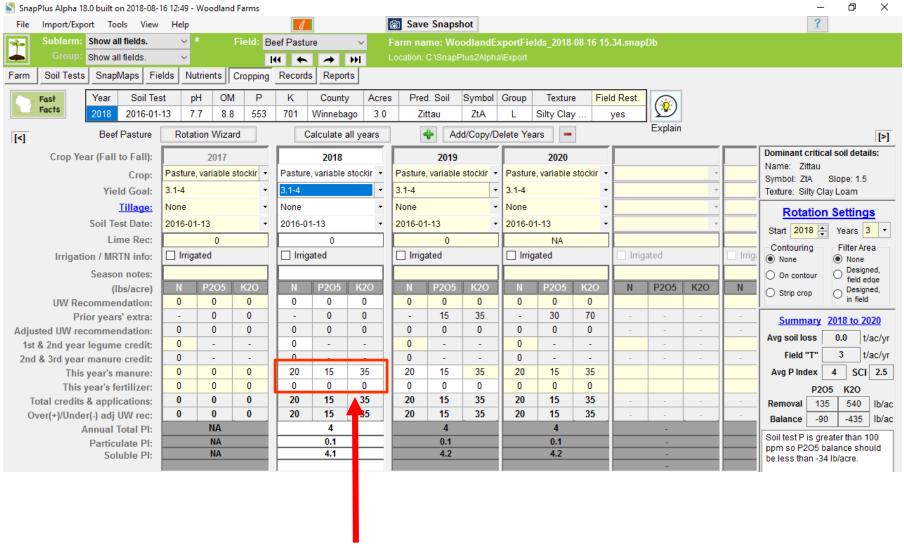
# Add Grazing Source



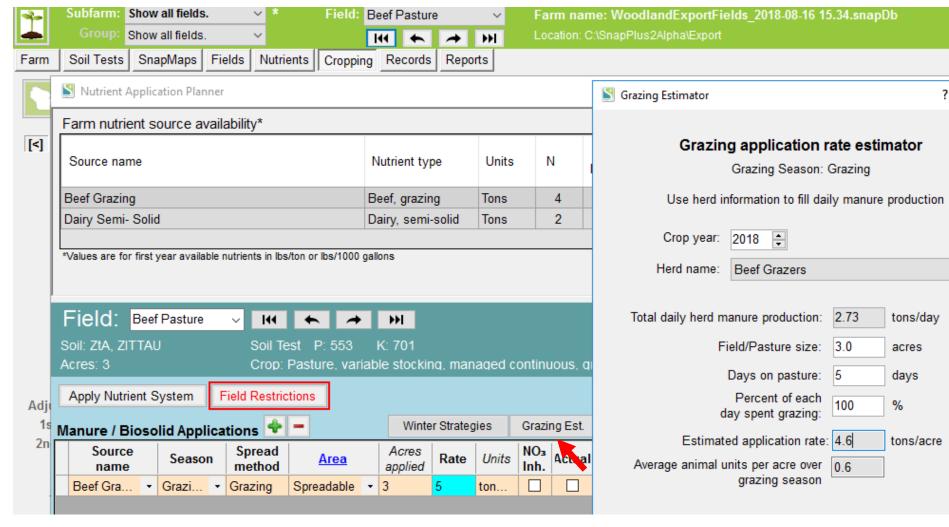


Total daily production (all animals) 2.73 95 tons/day Total AU

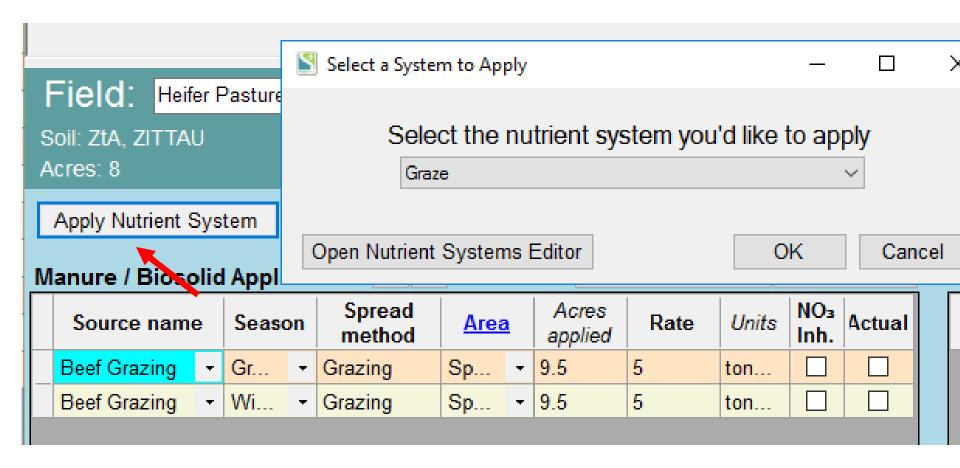
# Add Application



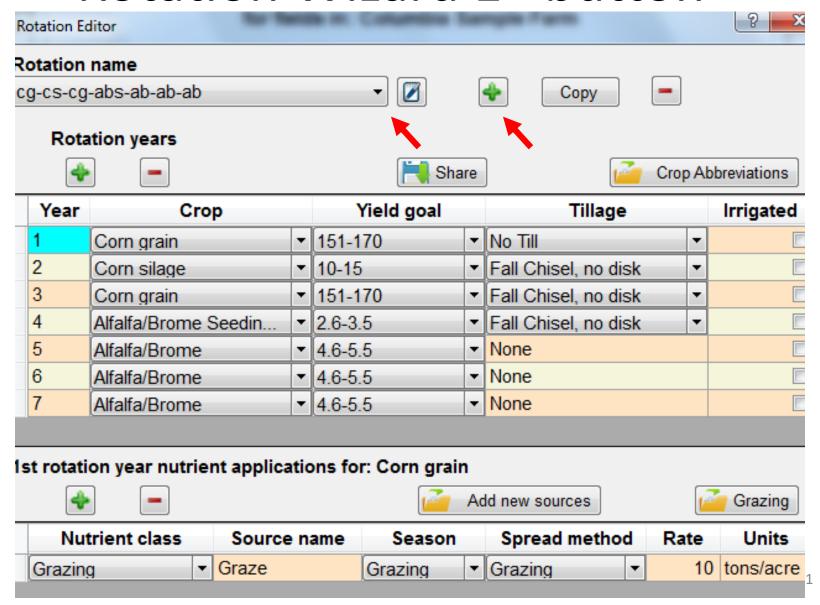
#### **Graze Rate**



# **Nutrient Application System**

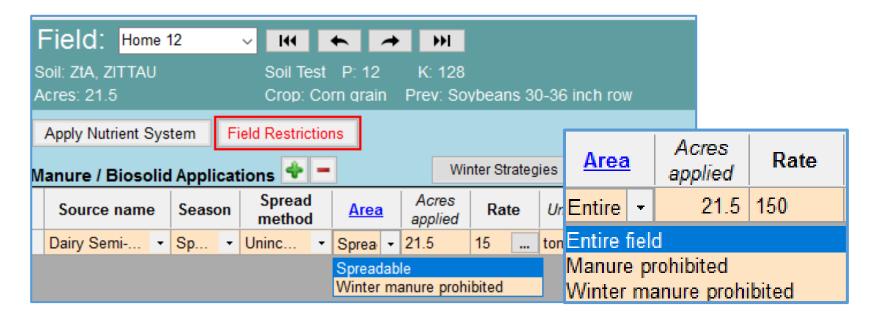


# Rotation Wizard 1st button



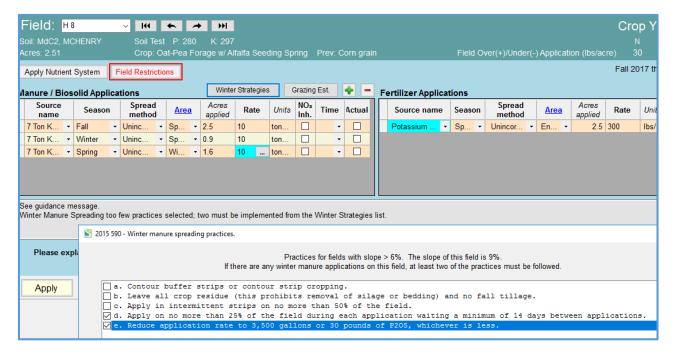


#### Spreadable Area



If your field has areas where manure is prohibited in the winter, like within 300' of wells or streams, then Spreadable Area located in the Nutrient Application Planner can help you apply to the allowable parts of the field in the winter. It also allows you to apply manure or fertilizer to the winter restricted area in other seasons.

# **Cropping Screen - Winter Spreading**



SnapPlus will select winter spreading strategies if it can be determined from the information already provided in the database or you can select two options for the winter application. The NM6 Winter Spreading Plan will show the practices for the field.

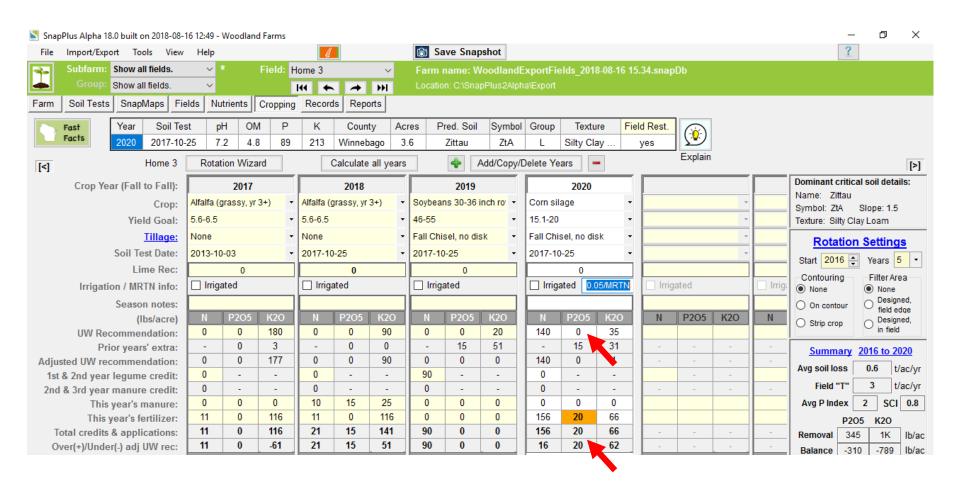
# Run NM Plan Reports, NM2



W codland Far ms			SnapPlus Application Restriction Compliance Check						
Field Name Year			Explanation						
Hom e 3		2020	P205 applied as sta band in close proxim						
Hom e 4		2020	P205 applied as sta band in close proxim	well setbacks followed.					
Excess N Pro	oblems		Home 2	2017					

# Go back to Cropping Tab to fix flags

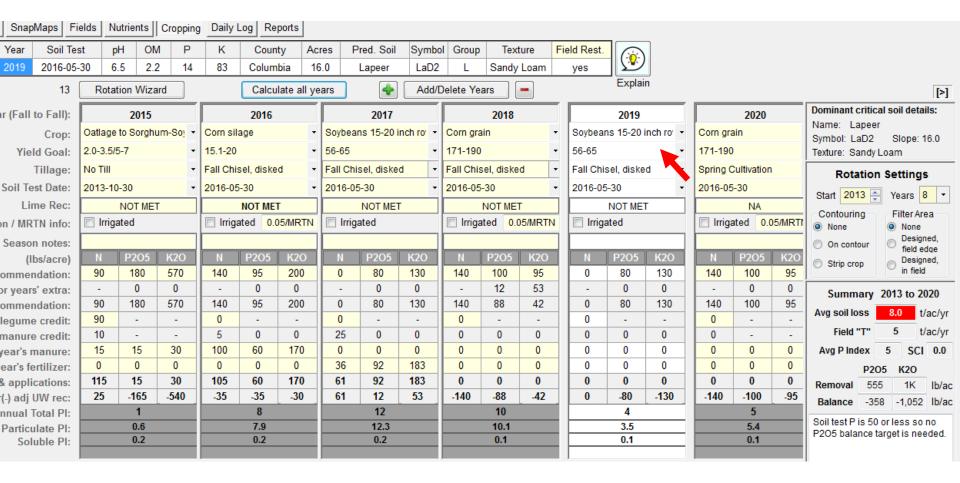
# Check Out Orange Flags

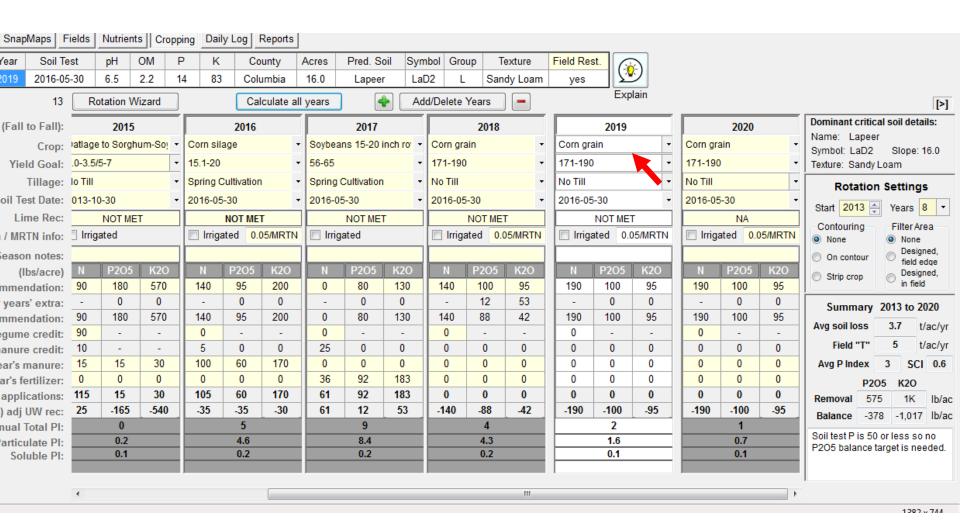


# Corn Starter Subsurface flag

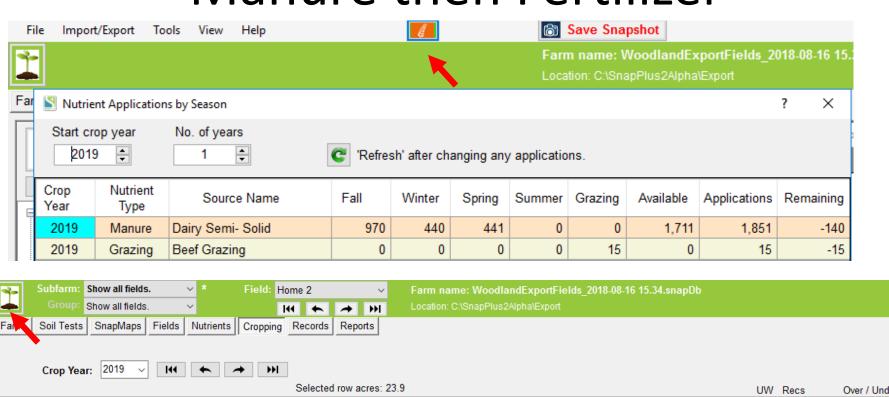
Crop Year: 2020 P205 K20 16 20 62 Field Over(+)/Under(-) Application (lbs/acre) Fall 2019 thru Summer 2020 **Fertilizer Applications** Spread Acres Source name Units Actual Season Rate Time Area method applied 32% UAN (... + SubSurf... -3.6 Su... + En... -20 gals... Ammonium... -Unincor... En... 3.6 50 lbs/... Sp... Sp... - Unincorpora -3.6 50 lbs/ Mesz -En... lbs/ Potassium ... - Sp... -Unincorporated 3.6 100 Incorporated Urea - Sp... -3.6 150 lbs/... SubSurface

P2O5 applied as starter to corn should be applied at planting and placed subsurface with, or in a band in close proximity to, the seed...

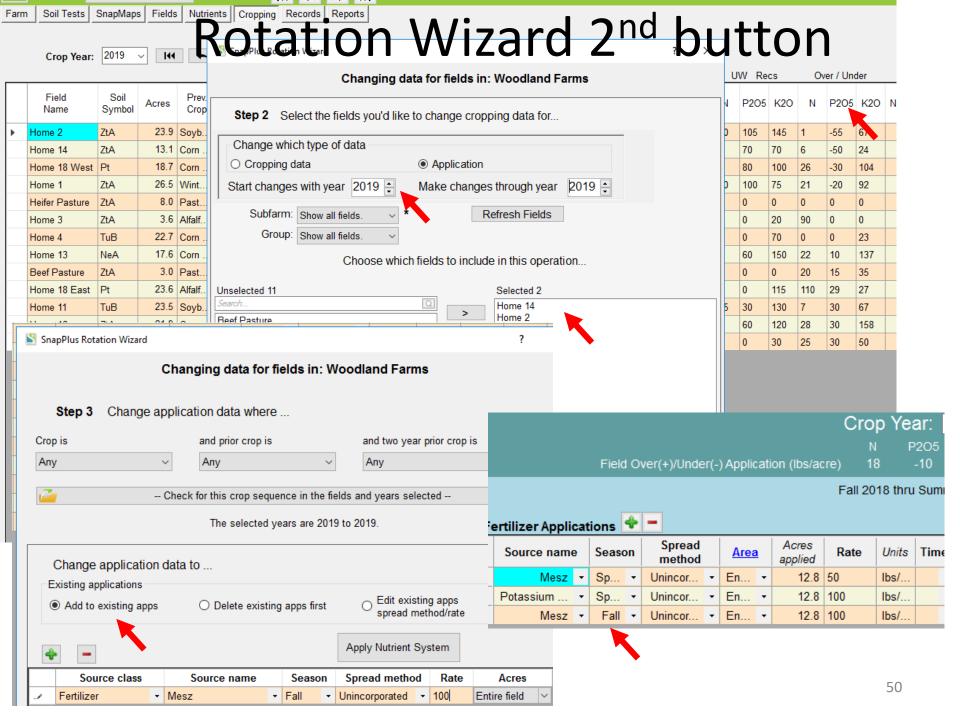




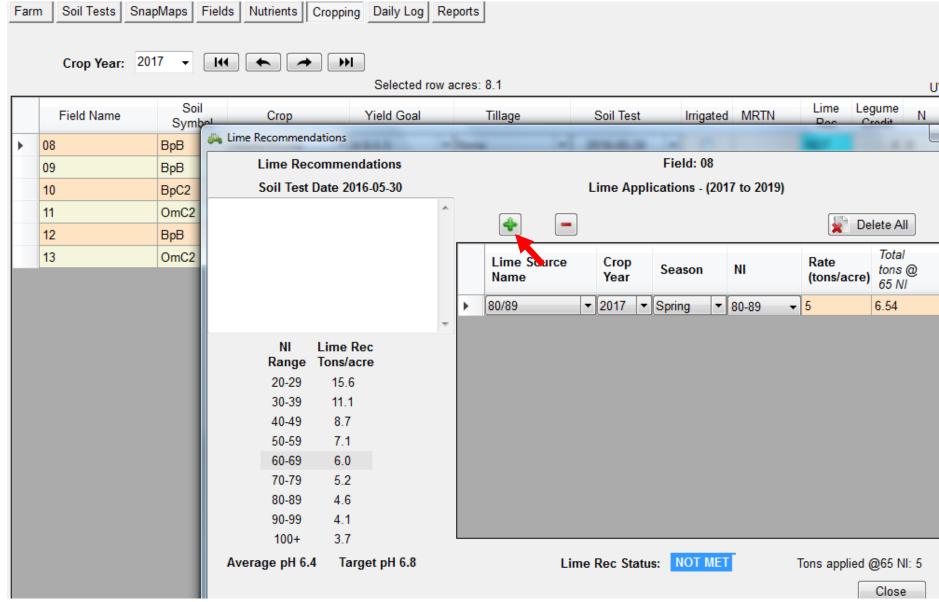
## Manure then Fertilizer



	Mark Control and C																							
Fai	Soil Tests SnapMaps Fields Nutrients Cropping Records Reports																							
	Crop Year: 2019 V III  W >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>																							
Selected row acres: 23.9 UW Recs Over / Under																								
	Field Name	Soil Symbol	Acres	Prev. Crop	Prev. Tillage	Prev. Yield Goal	Crop		Tillage		Yield Goal		Soil Test		Irrigated	MRTN	Lime Rec	Legume Credit	N	P2O5	K20	N	P2O5	K20
•	Home 2	ZtA	23.9	Soyb	Fall	46-55	Corn sil	•	Fall Chi	-	15.1-20	-	2015-10	-		0.05/	0	0	140	105	145	1	-55	67
	Home 14	ZtA	13.1	Corn	Fall	131-1	Soybea	•	Fall Chi	•	46-55	•	2017-10	•			0	0	0	70	70	6	-50	24
	Home 18 West	Pt	18.7	Corn	Fall	131-1	Soybea	•	Spring C	-	46-55	-	2017-10	•			0	0	0	80	100	26	-30	104
	Home 1	ZtA	26.5	Wint	Field	81-100	Corn grain	•	Fall Chi	•	151-1	•	2015-10	•		0.05/	0	0	140	100	75	21	-20	92
	Heifer Pasture	ZtA	8.0	Past	None	2-3	Pasture,	•	None	•	2-3	-	2016-01	•			0	0	0	0	0	0	0	0
	Home 3	ZtA	3.6	Alfalf	None	5.6-6.5	Soybea	•	Fall Chi	-	46-55	-	2017-10	•			0	90	0	0	20	90	0	0
	Home 4	TuB	22.7	Corn	Fall	15.1-20	Soybea	•	Fall Chi	-	46-55	-	2015-10	•			0	0	0	0	70	0	0	23
	Home 13	NeA	17.6	Corn	Fall	131-1	Oat-Pea	•	Spring C	•	2.0-3.5	•	2015-10	•			0	0	10	60	150	22	109	137



Add Lime



#### **WI Agricultural Water Quality Performance Standards**

NR151 & ATCP 50 Wis. Admin. Codes

#### NR 151 Performance Standards

- Meet **T** for fields and pastures
- Follow 590 NM plan
- Follow a 5' to 20' tillage setback from water
- Prevent direct runoff: feedlots, feed, waste water, or manure storage to waters
- Limit livestock access waters to maintain banks
- Follow manure storage technical stds. when constructing/abandoning. Maintain to prevent leaking or overflow.

Near surface water or areas susceptible to groundwater contamination

- Do not stack manure in an unconfined pile
- Divert clean water away from barnyards, feedlots, and manure storage

### ATCP 50 conservation practices

**Describes how farms need NM plan** when offered cost share \$
or without cost share if:

- 1. Participating in the **Farmland**Preservation
- 2. Regulated by **DNR WPDES**permit or **local ordinance**manure storage or livestock
  siting
- 3. Accepting manure storage cost share
- Causing a significant discharge

Exceeding state standards ATCP 50.04 is only allowed if approved by either DATCP or DNR. A local governmental unit is responsible for analyzing the legal adequacy of its regulations.

	NR 151.075 and NR 243.143 Runoff Management Targeted Performance Standard ver.8/6/2018									
Requires the following: No fecal contamination of wells; a NM plan to meet ATCP 50.04(3); and Silurian bedrock map										
information within or adjacent to cropland. NR 151.075(2), (4)(a)(b)(c)(d),										
<2' to Silurian bedr	ock or apparent water table All mechanical applications are prohibited.	NR 151.015(18)(e), 151.075(9), (3)								
<5' to bedrock	No mechanical Winter application when soils are frozen or snow covere	ed and no headland								
	stacking. 590 prohibits liquid manure in Feb. and March	151.075(7)								
Prohibited	Deskibited as about all and instances.									
mechanical	Prohibited mechanical applications:  1. Until fields are ranked for risk of pathogen delivery to groundwater.	aga przejet								
applications		• •								
	When rainfall >1" forecast within 24 hours.	151.075(8)								
2'-20' to bedrock	Prohibited mechanical applications setbacks:	151.075(16)								
	1000' setback from community well.	t 151.015(18)(b), 151.075(13)(a)								
Prohibited	300' up, 100' down slope from direct conduits to groundwater (DCTG)	W) NR 151.015(18)(c), (13)(c)								
mechanical	250' setback from other drinking wells.	R 151.015(18)(a), 151.075(13)(b)								
applications	100'setback from concentrated flow channel leading to DCTGW.	(13)(d)								
	Fields with ≥6% slope and concentrated flow channels to closed depres	ssion use one: 151 075/15)								
	Incorporation mechanical application within 24 hours.	151.015(8d)								
Restricted		1. 1								
application for	<ol><li>The field has 3 or more years of no tillage.</li></ol>	151.015(11m)								
solid and liquid	100' setback from closed depression use one:	151.075(14)								
mechanical	1. Applied at least 24 hours prior to precipitation capable of producing	runoff.								
applications	2. Incorporation/injection within 24 hours.	151.015(8p)								
	3. The field has 3 or more years of no tillage.	4 8.7								

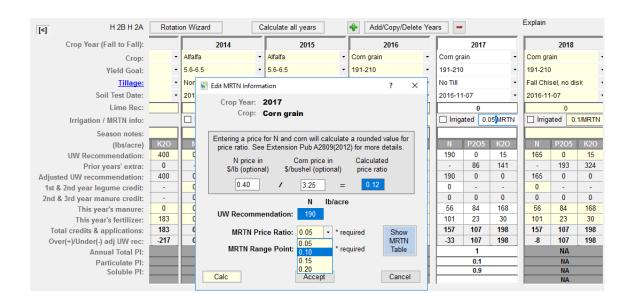
Depth to bedrock Corn needs 130-190 lbs. N/acre depending on soil type and crop rotation	Solid manure conditions  ≥ 12% DM for CAFOs  > 11% for 590 NM plans 2 lbs. N, 3 lbs. P2O5/ Dairy Ton *15T/A/Y= 30 lbs. N and 45 lbs. P2O5/A/Y	Liquid manure conditions  <12% DM for CAFOs  ≤ 11% for 590 NM plans  12 lbs. N, 6 lbs. P205/ 1,000 Dairy Gals.*13,500 Gals./A/Y=  162 lbs. N and 81 lbs. P205/A/Y
<b>2-3'</b> 151.075(10)	Incorporate* within 72 hours to ≤ 4" (10)(a)1.  and; at least one of the following: (10)(a)2.  a. Rate is lesser of A2809 or 15 T/Ac/Y 81 T/ac =162 lbs. N/ac, 40.5T /ac = 81 lbs. N/ac b. A2809 within 10 days of planting or on est. crop c. Pathogens ≤ 500,000 CFU	Pre-tillage if the field meets T* and; (10)(b)1. Incorporate/inject* to ≤ 4" within 24 hrs. (10)(b) 2. and; At least one of the following: (10)(b)3. a. Rate is lesser of A2809 or Table 1. Rates NR 214 13.5K g/a loam=162 lbs. N/ac, 6.75K g/a other=81 lbs. N/ac b. A2809 within 10 days of planting or on est. crop c. Pathogens ≤ 500,000 CFU
3-5' 151.075(11) 5-20' 151.075(12)	Same as above a, b, c except ≤6" till depth (11)(a)1.  Follow NRCS WI 2015-590 Standard and 151.075(16) above, no incorporation requirement.	Pre-tillage if the field meets T* and; (11)(b)1. Incorporate/inject* ≤ 6" within 24 hours (b)2. and; Same as above a, b, c.  Same as above except Table 1. Rates (12)(a)1. 27 K g/a loam=324 lbs. N/ac, 13.5K g/a other=162 lbs. N/ac

<sup>\*</sup>Exemption - Pre-tillage to at least 2" below manure application is not required if fields can't meet T when implementing tillage, crops, contouring, filter strips, or cover crops. Pre-tillage, incorporation, or injection is not required if 3 or more years of no tillage, 151.075(10)(c)(d), (11)(c)(d), (12)(b)(c). Mechanical liquid manure applications are limited to \$6,750 Gal./Ac/application where bedrock is within 2-5' 151.075(10)(c), (11)(c), and 10,000 Gal./Ac/application where bedrock is within 5-20', 151.075(12)(b).

Technical Standard available for cost share: 50.62 Manure storage systems. 50.69 Critical area stabilization. 50.70 Diversions. 50.75 Livestock fencing. 50.76 Livestock watering facilities. 50.78 Nutrient management. 50.80 Prescribed grazing. 50.81 Relocating or abandoning animal feeding operations. 50.82 Residue management. 50.83 Riparian buffers. 50.87 Sinkhole treatment. 50.89 Strip cropping. 50.96 Waterway system.

#### Questions for the participants:

1. Given the corn price is around \$3.00/bushel and nitrogen is around \$0.40/pound, can we change the default Maximum Return To Nitrogen to .10. The red flag will not show until the highest N rate of the MRTN range .05 ratio is exceeded. Should we update the MRTN default ratio?



- 2. Do you want a column for all the restrictions on a report?
- 3. Do you want a report that tells you which fields have no N fall restrictions, and no SWQMA present?
- 4. Do you want the NM Checklist as a report filling each item when possible?